CALIFORNIA REGION AL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-_____
CALIFORNIA WATER CODE SECTION 13267
FOR
WECO AEROSPACE SYSTEMS, INC.
GROUNDWATER TREATMENT AND DISPOSAL SYSTEM
PLACER COUNTY

This Monitoring and Reporting Program (MRP) incorporates requirements for monitoring the progress of groundwater remediation and the operation of a proposed groundwater treatment and disposal facility and at the Weco manufacturing facility property located at 1020 Airport Road, Lincoln. Existing data and information about the site show the presence of various chemicals, including the volatile organic compounds (VOCs), tetrachloroethene (PCE), 1,2-dichloroethane (1,2-DCA), chloroform and the oxygenate, methyl- tert-butyl-ether (MTBE). This MRP is issued pursuant to California Water Code Section 13267. Weco Aerospace Systems, Inc. (Discharger) is required to comply with this MRP. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and the nature of the discharge and matrix of the sampled medium. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

GROUNDWATER REMEDIATION MONITORING

As shown on Attachment B, there are five groundwater monitoring wells, one domestic supply well, and one proposed extraction well. Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Discharger shall submit plans and specifications to the Board for review and approval.

The five existing groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5) are screened at intervals from approximately 40 to 60 feet below ground surface (bgs). These five monitoring wells, the on-site domestic supply well, the proposed extraction well, and any new wells, including extraction wells, installed subsequent to the issuance of this MRP, shall be added to the monitoring program and shall be sampled and analyzed according to the schedule below. Sample collection and analysis shall follow standard EPA protocol.

Sample analysis shall be completed by a State certified laboratory and shall follow standard EPA protocol using the method specified or an equivalent method.

Constituents	EPA Analytical Method[1]	Maximum Practical Quantitation Limit[2]	Sampling Frequency
Methyl-tert-butyl-ether	8260B	0.5 ug/l	Quarterly
1,2 dichloroethane	8021B or 8260B	0.5 ug/l	Quarterly
Cis 1,2-dichloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Trichloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Tetrachloroethene	8021B or 8260B	0.5 ug/l	Quarterly
Chloroform	8021B or 8260B	0.5 ug/l	Quarterly
Total Volatile Organic Compounds[3]	8021B or 8260B	0.5 ug/l	Quarterly
Total Petroleum Hydrocarbons	8015M or 8260B	0.5 ug/l	Quarterly

[1] Reporting of EPA Method 8021B or 8260B analyses results must include all analytes listed in the method, plus any fuel oxygenates that are detected.
[2] For nondetectable results. All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be recorded as trace.
[3] Total of all VOCs.
ug/l Micrograms per liter
mg/l Milligrams per liter

Field measured parameters shall follow the schedule below:

Parameters	Units	Type of Sample	Sampling Frequency
Groundwater Elevation	0.01 Feet, Mean Sea Level (msl)	Grab	Every time monitoring wells and extraction well(s) are sampled
Electrical Conductivity	uhmos	Grab	
pH	0.1 units	Grab	

Field testing may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are provided with the appropriate monitoring report.

TREATMENT PERFORMANCE MONITORING

Prior to discharging treated groundwater, the Discharger shall evaluate the treatment system performance. The treatment performance evaluation shall consist of two phases:

(a) A start-up prove-out, and
(b) Long-term performance

SYSTEM START UP MONITORING

During the start-up prove-out, the Discharger shall monitor the treated effluent frequently to ensure that volatile organic constituents (VOCs) are removed from the groundwater. The Discharger shall collect samples from the groundwater influent and after the treated water exits the lead treatment vessel and again after exiting each subsequent treatment vessel according to the following schedule:

(a) At system start-up
(b) After twelve hours of operation from the groundwater influent and after exiting the final treatment vessel
(c) Weekly for the first month of operation
(d) At least monthly, thereafter

Samples will be analyzed by a State certified laboratory, for volatile organic constituents and fuel oxygenates.

FULL SCALE SYSTEM OPERATION MONITORING

Effluent Monitoring

After the system prove-out is complete, the Discharger shall begin the long-term performance evaluation by collecting effluent samples and analyzing the samples for the constituents listed below, including pH, specific conductance, and temperature. The Discharger shall collect the samples after the groundwater exits the lead treatment vessel and again after exiting each subsequent canister, just prior to discharge to land. The Discharger shall complete a change-out of both the primary and secondary vessels once breakthrough occurs in the secondary vessel. Effluent samples should be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. If monitoring results indicate the sample collected after the final treatment vessel exceeds either the monthly average or the daily maximum concentrations, the Discharger shall initiate a confirmation/verification program to determine if an exceedence has occurred. This program shall include collection of a confirmation sample from after the last treatment vessel. Based on the results of the confirmation sample, system modifications and/or additional effluent sampling may be required to assure compliance with this order.

The volume of extracted groundwater and the volumes of groundwater discharged to land shall be provided in quarterly monitoring reports as well as monthly system performance reports.

The effluent samples shall be collected from the exiting sample port of the final treatment vessel prior to discharge for the following analyses:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Volatile Organic Compounds[1,2]	µg/l	Grab	Monthly	Quarterly
Methyl-tert-butyl-ether	µg/l	Grab	Monthly	Quarterly
1,2 dichloroethane	µg/l	Grab	Monthly	Quarterly
Cis 1,2-dichloroethene	µg/l	Grab	Monthly	Quarterly
Trichloroethene	µg/l	Grab	Monthly	Quarterly
Tetrachloroethene	µg/l	Grab	Monthly	Quarterly
Chloroform	µg/l	Grab	Monthly	Quarterly
Total Petroleum Hydrocarbons	µg/l	Grab	Monthly	Quarterly
Total Volume of Water Treated	Gallons	Continuous	Monthly	Monthly
Flow Rate at Time of Sampling	gpm	Grab	Monthly	Monthly
Average Flow Rate (since last sampling)	gpm	Continuous	Monthly	Monthly

1. Required analytical method shall be either USEPA Method 8260B or 8021B. The maximum detection limits must meet the lowest reporting limit in the Department of Health Services detection limits for purposes of reporting (DLRs).
2 Analysis must include all analytes listed in the method, plus fuel oxygenates which shall be analyzed using USEPA Method 8260B.

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Extraction Well Monitoring

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Volatile Organic Compounds[1,2]	µg/l	Grab	Quarterly	Quarterly
Methyl-tert-butyl-ether	µg/l	Grab	Monthly	Quarterly
1,2 dichloroethane	µg/l	Grab	Monthly	Quarterly
Cis 1,2-dichloroethene	µg/l	Grab	Monthly	Quarterly
Trichloroethene	µg/l	Grab	Monthly	Quarterly
Tetrachloroethene	µg/l	Grab	Monthly	Quarterly
Chloroform	µg/l	Grab	Monthly	Quarterly
Total Petroleum Hydrocarbons	µg/l	Grab	Monthly	Quarterly
Average Extraction Rate (since last sampling)	Gpm	Continuous	Monthly	Monthly
Pressure at Time of Sampling	Psig	Grab	Monthly	Monthly
Water Level	0.01 feet msl	Grab	Monthly	Monthly

1 Required analytical method shall be either USEPA Method 8260B or 8021B. The maximum detection limits must meet the lowest reporting limit in the Department of Health Services detection limits for purposes of reporting (DLRs).
2 Analysis must include all analytes listed in the method, plus fuel oxygenates which shall be analyzed using USEPA Method 8260B.

REPORTING

In reporting monitoring data, the Discharger shall submit hard copies of all documents and data submittals to the Regional Board. The Discharger shall arrange the data in tabular form so that the date, sample type, and reported analytical result for each sample are readily discernible The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall also be reported to the Regional Board. In addition, the Discharger shall notify the Board within 24 hours of any unscheduled shutdown of the groundwater extraction system.

Pursuant to Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulations, effective January 1, 2005, the discharger shall submit the following information electronically to the State Water Resources Control Board's GeoTracker database:

1. All chemical analytical results for soil, water, and vapor samples.
2. The latitude and longitude of any permanent sampling point for which data is reported, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System, if available.
3. The surveyed elevation relative to a geodetic datum of any permanent sampling point.
4. The elevation of groundwater in any permanent monitoring well relative to the surveyed elevation.
5. A site map or maps showing the location of all sampling points.
6. The depth of the screened interval and the length of screened interval for any permanent monitoring well.
7. PDF copies of boring logs.
8. PDF copies of all reports, workplans, and other documents, including the signed transmittal letter and professional certification by a California Licensed Civil Engineer or a Registered Geologist.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

A. Monthly Operation Reports

The Discharger shall submit to the Regional Board monthly operation reports by the 1st day of the second month following sampling (i.e., the January Report is due by 1 March). These operation

reports shall contain a summary of the results of monitoring, including effluent and discharge flow rates, volume of treated water, pressure readings, and water levels, operation and maintenance activities for that month, and a summary of any shutdown and/or spill events that occur that month.

B. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Regional Board on the **1st day of the second month following the end of each calendar quarter (i.e., by 1 February, 1 May, 1 August, and 1 November**). At a minimum, the reports shall include:

1. A summary of all influent and effluent treatment system performance monitoring data;
2. Results of groundwater monitoring, including a narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring event. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well and an analysis of trends in the concentrations of pollutants, documenting depth to groundwater; parameters measured before, during, and after purging; calculation of casing volume; total volume of water purged, etc.;
3. Groundwater contour maps for all groundwater zones;
4. A scaled map showing relevant structures and features of the facility, the injection grid, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. A table showing well construction details such as well number, groundwater zone being monitored, coordinates (longitude and latitude), ground surface elevation, reference elevation, elevation of screen, elevation of bentonite seal, elevation of filter pack, and elevation of well bottom;
7. A narrative discussion of the analytical results for all groundwater locations monitored, including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
8. Copies of all laboratory analytical report(s);
9. Cumulative data tables containing the water quality analytical results and depth to groundwater;

10. If applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

C. Annual Report

An Annual Report shall be submitted to the Regional Board by **1 February** of each year. This report shall contain an evaluation of the effectiveness and progress of the remediation, and may be submitted with the fourth quarter monitoring report. The Annual Report shall contain the following minimum information:

1. Tabular and graphical summaries of all data collected during the previous year;
2. Groundwater contour maps and contaminant concentration maps containing all data obtained during the previous year;
3. Graphical presentation of concentrations of groundwater pollutants and data from monitoring and analysis performed during the entire year;
4. A discussion of compliance and the corrective action taken, if any, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. A discussion of the long-term trends in the concentrations, fate and transport of the pollutants in the groundwater monitoring wells;
6. A discussion of any data gaps, potential deficiencies/redundancies in the monitoring system or reporting program.
7. An evaluation of the performance of the groundwater treatment system, including a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants and whether the plume of pollutants and pollutant breakdown products is being captured by the extraction system or is continuing to spread, as well as a forecast of the flows anticipated in the next year;
8. An evaluation of the operation of the groundwater treatment system, including cumulative information on the mass of pollutant removed from the subsurface, system operating time, and any field notes pertaining to the operation and maintenance of the system;
9. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
10. A discussion of any data gaps, potential deficiencies/redundancies in the monitoring system or reporting program and the anticipated date for completion of cleanup activities.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If

the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program as of the date of the Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

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(Date)

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